Space Weather Forecast

Issued on Tuesday, 30 May 2023 at 01:12 Local

This forecast provides a four day assessment of space weather events. The probabilities stated below are for reaching or exceeding the given levels. For more information about space weather impacts please see the Met Office Space Weather Scales https://www.metoffice.gov.uk/weather/learn-about/space-weather/uk-scales

---

Space Weather Forecast Headline: R1/R2 radio blackouts likely at times throughout. Slight chance of isolated G1/Minor Geomagnetic storms.
Analysis of Space Weather Activity over past 24 hours

Solar Activity: Solar activity has been Low with no significant flares. There are several relatively large and complex regions on the visible disc in the western hemisphere. No Earth-directed Coronal Mass Ejections (CMEs) were observed during the period.

Solar Wind / Geomagnetic Activity: Solar winds have remained largely at slow ambient levels 360-400 km/s. The important north-south component has weakly fluctuated. Geomagnetic activity was Quiet (Kp 0-2).

Energetic Particles / Solar Radiation: The count rate of energetic particles (high energy protons) is at background levels with no solar radiation storms observed.

Four-Day Space Weather Forecast Summary
Solar Activity: Solar activity is expected to remain Low to Moderate. There is a slight chance of Strong flares, mainly from a large and complex region in the southwest of the solar disc.

Solar Wind / Geomagnetic Activity: A Coronal Mass Ejection (CME) that left the Sun on 26 May may give a glancing blow at Earth on Day 2 or 3 (31 May-01 Jun). Fast winds from a coronal hole may arrive later on Day 3 or Day 4 (01-02 June).
Solar winds are likely to remain largely at slightly elevated levels, perhaps becoming elevated Days 3-4 (01-02 June). Geomagnetic activity is expected to be mainly Quiet to Unsettled (Kp 0-3), but with a chance of Active (Kp4) and slight chance of G1/Minor Geomagnetic Storm intervals (Kp5) through the period.

Energetic Particles / Solar Radiation: The count rate of energetic particles (high energy protons) is expected to be at background levels with solar radiation storms unlikely to occur. However, there is a slight chance of reaching the Minor Storm threshold should any larger flares occur, mainly from a large and complex region in the south.

Issued by Met Office Space Weather Advisor, Tel: +44 (0) 330 135 4254 Email: moswoc@metoffice.gov.uk

© Crown Copyright 2023. All Rights Reserved.

Met Office

Space Weather Forecast

Geomagnetic Storms:

Geo-Magnetic Storm Probability (Exceedance)	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Minor or Moderate	G1 to G2	No	10	20	20	20
Strong	G3	No	1	1	1	1
Severe	G4	No	1	1	1	1
Extreme	G5	No	1	1	1	1

Radio Blackouts - X Ray Flares:

X Ray Flares Probability	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	R1-R2 M Class	No	60	60	60	65
Very Active	R3 to R5 X	No	10	10	10	10

Solar Radiation Storms - (High Energy Protons):

Radiation Storms Probability (Exceedance)	Level (cm^{-2} sr^{-1} s^{-1})	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	≥ S1	No	20	20	20	20
Very Active	≥ S3 *	No	1	1	1	1

* S3 ≥ 10 MeV ≥ 1000 pfu and / or ≥ 50 MeV ≥ 10 pfu. (pfu = $cm^{-2}sr^{-1}s^{-1}$)

Issued by Met Office Space Weather Advisor, Tel: +44 (0) 330 135 4254 Email: moswoc@metoffice.gov.uk

© Crown Copyright 2023. All Rights Reserved.